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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,729	10/23/2003	Charles D. Jaquays	1014	7684

7590

07/08/2005

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EXAMINER

MARCANTONI, PAUL D

ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/690,729

Applicant(s)

JAQUAYS, CHARLES D.

Examiner

Paul Marcantoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-28 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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Applicant's arguments filed 4/22/05 have been fully considered but they are not persuasive.

Claims 1-28 are rejected under 35 U.S.C. 102(a, b, and e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jaques et al. '352 or Iwu '567.

*Note: Ray et al. '749 has been withdrawn.*

The above cited references teach treating bauxite waste (ie red mud or bauxite tailings) by mixing with an acid to form a usable product that can be added later to a cementitious material and potentially used as a building material thus anticipating the instant invention. All references would appear to teach a range of pH that would also overlap the instant invention. Thus, even if not anticipated, overlapping ranges would have been found at least to be prima facie obvious to one of ordinary skill in the art.

#### Response

The examiner disagrees with applicants argument that the remaining references in the rejection are implausible because of disparate objectives and procedures. In rebuttal, the objectives closely resemble each other and applicants even use the same exact composition as the prior art. The only difference is that applicants use bauxite tailings which is a waste material of the same composition as bauxite mined from the ground. Both do contain bauxite. It is obvious for one of ordinary skill in the art to use a waste material or recycled material in a known process because the starting materials are still compositionally the same.

Jaques '352:

The applicants state that Jaques teach treating "virgin" bauxite to produce pozzolan for use in concrete on page 2 of their specification. Yet, where does it say anything about "virgin" bauxite? It does not. Jaques does not limit his invention to merely freshly mined bauxite. In fact, what the Jaques '352 does say is that "any silica rich ore which yields amorphous silica upon treatment with an acid is appropriate for use in the present invention, including but not limited to bauxite, kaolin, and mullite". Jaques '352 treats with an acid such as sulfuric acid which give it pozzolanic properties (see col.4, lines 21-29). That "any silica rich ore" is inclusive of even bauxite tailings. The fact that bauxite tailings are still compositionally the same as bauxite even strengthens the position that these waste materials are inclusive for treatment in Jaques '352 process.

The applicants also argue that Jaques involves acid digestion of silica ore and not a neutralization of alkaline values. In rebuttal, this argument is not understood. One of ordinary skill in the art would have understood that if bauxite ore is mixed with an acid it would lead to a lower pH and a neutralization of alkalinity or alkaline values as the applicants call it. The applicants do not use the word digestion but they certainly perform the same step of treatment of bauxite (tailings or waste red mud for applicants) with sulfuric acid to form a silica slurry. The applicants also allege that Jaques et al. does not teach the pH levels of 5.5 to 6 from this step. In rebuttal, it is the examiner's position that both Jaques

and the applicants add sulfuric acid to bauxite material and it is expected the pH to be approximately the same. Further, the aim of both inventions is to make a pozzolanic material which can be used for cement (see preamble of claim 1 of Jaques) and Jaques teaches process steps which accomplish this goal which is inclusive of the proper pH ranges. More so, both processes are also alike in that the mixture is left to settle and the filtrate is separated from the supernatant fluid by decantation and/or filtration. A reading of claim 1 of Jaques teaches that this is exactly what is done in his process as well. The applicants next allege that their product produced is different than the prior art but make this assertion without ~~they~~ <sup>the</sup> basis of absolutely no experimental support or data to bolster this position.

Iwu 567

The applicants argue that the process of their instant invention and Iwu differ. Yet, Iwu teaches treating bauxite waste red mud (note: "red mud" is the same as bauxite tailings and this is admitted by applicants on the last two lines of page 1 and in the abstract of Kirkpatrick et al. (US 5,931,772) which teaches "bauxite tailings that remain after alumina extraction, also known as "red mud") or bauxite tailings with a strong acid such as hydrochloric acid to obtain the same exact range of pH of 5.5 to 6 as that claimed by applicants for their own claimed invention. The only difference is that Iwu uses hydrochloric acid. It is the examiner's position that it would have been an obvious design choice for one of ordinary skill in the art to use another strong acid such as sulfuric acid for hydrochloric acid because they both are functionally equivalent in neutralizing the alkalinity of the bauxite (red mud or mine tailings) material. Note that

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applicants' process does not require that the strong acid must be sulfuric acid either and they too can use sulfuric acid or hydrochloric acid (see middle of page 3 of applicants' specification). The applicants independent claim 1 process claim does not even require that the acid must be sulfuric either (merely broadly claims "acid") and provides further support that the use of a strong acid such as sulfuric acid or hydrochloric acid are functionally equivalent for applicants' claimed process.

The applicants argue that Iwu does not teach using the treated residue product in a cement product such as brick (with emphasis, first paragraph of page 3 of applicants' remarks from April 22<sup>nd</sup> response). Applicants thus admit that brick is a cement product. Yet, claim 3 in column 2 of Iwu teaches the formation of construction brick. If brick is a cement product as applicants acknowledge in their response, then Iwu does meet the limitations of their claimed invention. It is also noted that the applicants do not define in claim 10 what they mean by cementitious material (is it a cement such as Portland cement or a pozzolan which can also be cementitious-the applicants do not clearly define this nor particularly point out and distinctly claim a *hydraulic* cement such as Portland cement). Note that the treated bauxite tailings are pozzolanic just as they are in Jaques and meet the limitation of a cementitious material. Note that Iwu, like applicants mold their cementitious materials to form a brick in claims 2 and 3 of column 2. (See applicants claim 18 also). It is also noted that applicants do not define what they mean by cementitious material. Clay itself can be construed as cementitious. In fact Webster's II New Riverside Dictionary defines cementitious as a substance that

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hardens to function as an adhesive. The clay is cementitious because it adheres with the treated bauxite tailings or red mud.

For the foregoing reasons, the finality of this office action is now proper.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Marcantoni  
Primary Examiner  
Art Unit 1755